

## REMARKS

Claims 15-34 are pending in the application.

The Office Action rejected claims 15-33 under 35 U.S.C. § 101 as being directed to non-statutory subject matter, i.e., for being inoperable and lacking utility, and for being abstract ideas.

Applicant traverses these rejections, because claims 15-33 are statutory subject matter within the meaning of § 101.

Applicants' specification includes a specific, substantial, and credible utility of "providing engineering and technical support services to remotely diagnose and resolve a technical problem associated with a technical product or service." (Applicants' Specification, page 2, lines 19-21). This automation helps reduce the high cost of training and sending technical support personnel to a customer's site to diagnose and resolve the technical problem. (Applicants' Specification, page 2, lines 4-18).

This utility corresponds in scope to the subject matter in the claims. Claim 15 recites, *inter alia*, "A system for diagnosing a fault" with at least one concrete tangible result of a "fault diagnosis corresponding to said one of the resolution points" which is transmitted to "a user access device". Claim 28 recites, *inter alia*, "A method for diagnosing a fault" with at least one concrete tangible result of "the fault diagnosis corresponding to said one of the resolution points" which is transmitted to the user access device. Claim 34 recites, *inter alia*, "A computer implemented system for diagnosing a fault" with at least one concrete tangible result of "the fault diagnosis corresponding to said one of the resolution points" which is transmitted to the user access device. The dependent claims 16-27 and 29-33 inherit at least the utility of the independent claims 15 and 28 and may have additional specific utility. Thus, without having to train and send a technical support person to a customer's site, the systems and methods of claims 15-34 remotely determine a fault diagnosis corresponding to a resolution point and transmit it to a user access device. A person of ordinary skill in the art would immediately appreciate the well-established utility of automation in the claimed invention, specifically remotely diagnosing and resolving a technical problem.

The claimed invention is directed to systems and methods for diagnosing faults, which are within the statutory categories of machines and processes. In addition, as shown above, the claimed invention includes a useful concrete tangible result, i.e. a fault diagnosis, and is, therefore, not an abstract idea. Applicants respectfully disagree that the claimed invention must be “implemented on a computer” as suggested in the Office Action. (Office Action, pages 4-5). The systems and methods of the claimed invention may be implemented in many ways using various machines that are not necessarily computers. For example, a method for diagnosing faults might be implemented on a fault diagnosing machine, a cellular phone, or another electronic device that is not considered a computer.

The Office Action rejected claims 15-27 and 34 under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 5,644,686 to Hekmatpour (“Hekmatpour”).

The Office Action only partially considers claim 15 on page 6 and then summarily rejects the remaining claims 16-27 and 34 on page 7. Thus, the Office Action fails to meet the requirements of 37 CFR § 1.104(a)(2): “The reasons for any adverse action or any objection or requirement will be stated in an Office Action and such information or references will be given as may be useful in aiding the applicant....” and MPEP § 707.07(d): “Where a claim is refused for any reason relating to the merits thereof it should be ‘rejected’ and the ground of rejection fully and clearly stated.” (*Emphasis added*).

Anticipation under § 102(b) requires a single reference that teaches each of the claimed elements arranged as in the claims. However, the Office Action fails to consider each of the claimed elements as arranged in the claims. Applicant respectfully submits that Hekmatpour fails to teach each of the claimed elements.

The Office Action argued that Hekmatpour teaches in figures 11-13 and 15 the following element of claim 15 “a user interface module in communication with said decision tree module, said knowledge base and a user access device”. However, this element of claim 15 includes further limitations that were not considered in the Office Action, i.e. claim 15 recites, *inter alia*, “a user interface module in communication with said decision tree module, said knowledge base and a user access device, said user interface module including instructions to implement a method comprising: designating the starting decision point as the next decision point; transmitting the fault symptom query corresponding to the next decision

point to the user access device; receiving a reply including one of the potential responses; continuing said transmitting the fault symptom query and receiving a reply until said one of the potential responses indicates one of the resolution points, wherein if said one of the potential responses indicates one of the decision points then said one of the decision points is designated as the next decision point; and transmitting the fault diagnosis corresponding to said one of the resolution points to the user access device.”

The Office Action did not point out where in Hekmatpour the method steps of the instructions included in the user interface module of claim 15 are disclosed. Applicant respectfully submits that Hekmatpour fails to disclose these method steps and, as a result, the user interface of Hekmatpour is not the same as the one in claim 15, when claim 15 is considered in its entirety. Figures 11-13 and 15 and the corresponding detailed description in Hekmatpour describe training and certification applications of the multimedia/hypermedia system/method. (Hekmatpour, abstract, col. 7, lines 4-22, col. 20 line 23 to col. 24 line 17). The method steps of the instructions included in the claimed user interface module have nothing to do with training and certification.

Claim 15 recites, *inter alia*, “transmitting the fault symptom query corresponding to the next decision point to the user access device; receiving a reply including one of the potential responses; continuing said transmitting the fault symptom query and receiving a reply until said one of the potential responses indicates one of the resolution points.” Hekmatpour fails to disclose at least these elements. Hekmatpour discloses a “hierarchical knowledge processing algorithm” that “employs a hierarchy of abstract problem spaces” and then refines it to “produce a skeletal plan” all without any user input. (Hekmatpour, col. 17, lines 18-49, figure 10). Thus, Hekmatpour differs from the claimed invention, which includes user input from the “starting decision point” and each following decision point until “the fault diagnosis” corresponds to a “resolution point”. Consequently, the claimed invention has an advantage over Hekmatpour in that the user is more involved in each step, making the diagnosis more likely to be correct.

Therefore, claim 15 is patentable over Hekmatpour. Claims 16-27 depend, directly or indirectly from claim 15 and, thus, inherit the patentable subject matter of claim 15 and may contain additional patentable subject matter.

The Office Action did not clearly state the grounds of rejection for claims 16-27 and 34. However, Applicant respectfully submits that claims 16-27 and 34 are patentable over Hekmatpour for at least the same reasons as given with respect to claim 15.

The Office Action rejected claims 28-33 under 35 U.S.C. § 103(a) as being unpatentable over Hekmatpour in view of U.S. Patent No. 5,127,005 to Oda et al. (“Oda”) and further in view of article “Marginal Fault Diagnosis Based on E-beam Static Fault Imaging with CAD Interface” by Kuji (“Kuji”).

The Office Action incorrectly states that Hekmatpour teaches the portion of claim 28: “transmitting the fault symptom query corresponding to the next decision point to a user access device” in figures 11-13 and 15. However, as stated above, figures 11-13 and 15 and the corresponding detailed description in Hekmatpour describe training and certification applications of the multimedia/hypermedia system/method. (Hekmatpour, abstract, col. 7, lines 4-22, col. 20 line 23 to col. 24 line 17). The method steps of the claim 28 have nothing to do with training and certification.

The Office Action incorrectly states that Hekmatpour teaches the portion of claim 28: “receiving a reply from the user access device including one of the potential responses” in figures 14 and 19. Figures 14 and 19 merely describe the general concept of a user interface. Figure 14 “charts IBM's common user access (CUA) guidelines and user interface design principles employed in a graphical user interface in accordance with the present invention”. (Hekmatpour, col. 7, lines 16-19). Figure 19 “is one embodiment of a logical page attribute menu useful in customizing logical page templates in accordance with the present invention”. (Hekmatpour, col. 7, lines 32-34). Figures 14 and 19 fail to disclose the claimed reply that includes one of the potential responses in the decision tree.

Oda and Kuji also do not disclose at least these elements. Therefore, claim 28 is patentable over the combination of Hekmatpour, Oda, and Kuji. Claims 29-33 depend, directly or indirectly from claim 28 and, thus, inherit the patentable subject matter of claim 28 and may contain additional patentable subject matter.

For all the reasons advanced above, it is respectfully submitted that the application is in condition for allowance. Accordingly, reconsideration and allowance of the claims are

respectfully requested. The Examiner is cordially requested to telephone, if the Examiner believes that it would be advantageous to the disposition of this case.

The Commissioner is hereby authorized to charge any additional fees or credit any overpayment, which may be required for this amendment, to Deposit Account No. 06-1130. In the event that an extension of time is required, or may be required in addition to that requested in any petition for an extension of time, the Commissioner is requested to grant a petition for that extension of time which is required to make this response timely and is hereby authorized to charge any fee for such an extension of time or credit any overpayment for an extension of time to Deposit Account No. 06-1130.

Respectfully submitted,

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